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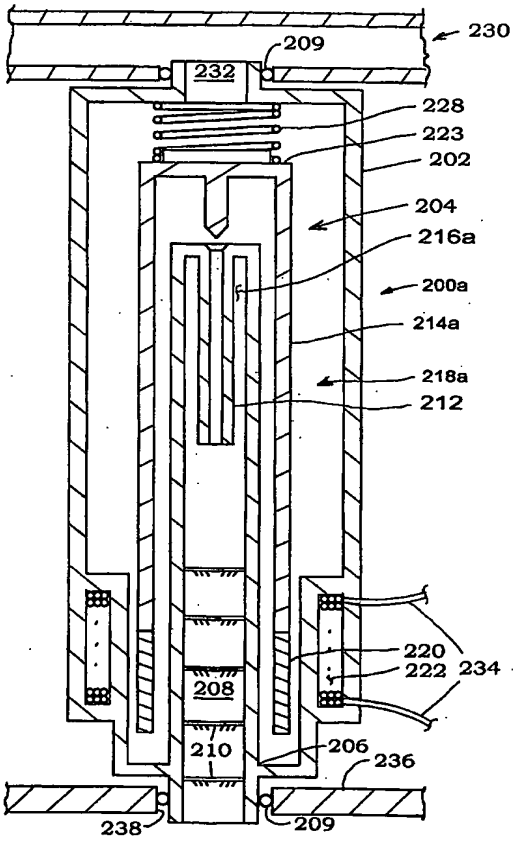
(54) Title: ANTI-DETONATION FUEL DELIVERY SYSTEM



(57) Abstract: Apparatus sealably incorporating a fuel metering device and fuel processing device [200, 200a, 200b] for producing a stabilized fog of fuel droplets sized 50 microns and less that when mixed with combustion air burn completely, reduce or eliminate detonation (knock) in internal combustion engines and reduce fuel octane requirements. The apparatus [200, 200a, 200b] may include a carrier gas reservoir [216, 216a] closed to external carrier gasses. A heater [205] may be employed to flash into vapor a portion of the liquid fuel to develop a carrier gas. In embodiments for jet or turbine engines, bleed gas from the engine may be used to provide carrier gas through a fuel processor [254], or the fuel may be heated -by -heater [260] to flash some of the fuel into vapor to provide carrier gas through the fuel processor to produce the stabilized fog of fuel droplets.

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